AMENDMENT OF SOLICI	TATION/MODI	FICATION OF CONTRACT		1. CONTRACT	ID CODE		. 1	OF PAGES
					* PD 0 10 0		1	.11
2. AMENDMENT/MODIFICATION NO. 0005	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	EQUISITION/PURCHASE REQ. NO.			5. PROJECT NO.(If applicable)		
6. ISSUED BY CODE	10-Jan-2006 W912P8	7. ADMINISTERED BY (If other than item 6)		Dalmado CODE				
USACE, CONTRACTING DIVISION ATTN: CEMVN-CT, ROOM 172 7400 LEAKE AVE. NEW ORLEANS LA 70118-3651	W9121 0	See Item 6		COL	DE			
8. NAME AND ADDRESS OF CONTRACTO	OR (No., Street, County,	State and Zip Code)	Х	9A. AMENDMI W912P8-06-R-	ENT OF S	OLI	CITAT	ION NO.
			Х	9B. DATED (SI 06-Jan-2006		11)		
				10A. MOD. OF	CONTRA	CT/0	ORDER	NO.
and a				10B. DATED (SEE ITEN	M 13)	
CODE	FACILITY CO	<u>DE</u> APPLIES TO AMENDMENTS OF SOLI	СІТ	ATIONS				
X The above numbered solicitation is amended as set f					X is not ex	tanda	d	
Offer must acknowledge receipt of this amendmen (a) By completing Items 8 and 15, and returning or (c) By separate letter or telegram which includes RECEIVED AT THE PLACE DESIGNATED FOR REJECTION OF YOUR OFFER. If by virtue of this provided each telegram or letter makes reference to	t prior to the hour and date sp copies of the amendm a reference to the solicitation THE RECEIPT OF OFFERS s amendment you desire to ch	ecified in the solicitation or as amended by one of ent; (b) By acknowledging receipt of this amendment and amendment numbers. FAILURE OF YOUR SPRIOR TO THE HOUR AND DATE SPECIFIEI ange an offer already submitted, such change may be	ent or ACK O MA	ollowing methods: n each copy of the off NOWLEDGMENT AY RESULT IN nde by telegram or let	er submitted			
12. ACCOUNTING AND APPROPRIATION		, 1 1 2		•				
13 THIS I	TEM APPLIES ONLY	TO MODIFICATIONS OF CONTRACTS	/OR	PDERS				
IT MC	DIFIES THE CONTRA	CT/ORDER NO. AS DESCRIBED IN IT	EM	14.				
A. THIS CHANGE ORDER IS ISSUED PU CONTRACT ORDER NO. IN ITEM 10		authority) THE CHANGES SET FORTF	I IN	ITEM 14 ARE N	MADE IN	THE	7	
B. THE ABOVE NUMBERED CONTRAC office, appropriation date, etc.) SET FC		O TO REFLECT THE ADMINISTRATIV RSUANT TO THE AUTHORITY OF FA			as changes	in p	aying	
C. THIS SUPPLEMENTAL AGREEMENT	I IS ENTERED INTO P	URSUANT TO AUTHORITY OF:						
D. OTHER (Specify type of modification a	and authority)							
E. IMPORTANT: Contractor is not,	is required to s	gn this document and return	col	pies to the issuing	g office.			
 14. DESCRIPTION OF AMENDMENT/MOD where feasible.) The above numbered solicitation for New C Emergency Levee Repairs, Contract P14 - I 02731 SURFACING. (See Attached) PROPOSAL DUE DATE AND TIME REMAINS 	Orleans To Venice Hurri B/L Sta. 650+00 to B/L	cane Protection Project, Buras Levee D	istric	ct, West Bank Ri	iver Levee	Э,		
Except as provided herein, all terms and conditions of the 15A. NAME AND TITLE OF SIGNER (Type		9A or 10A, as heretofore changed, remains unchar	_			oe or	print)	
		TEL:		EMAIL:				
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNI	ED 16B. UNITED STATES OF AME	RIC	Α	1	6C. 1	DATE S	SIGNED
		BY				10-	Jan-200)6
(Signature of person authorized to sign)		(Signature of Contracting Of	fice	r)				

Section Table of Contents

SECTION 02731 - SURFACING

PART 1 GENERAL	
1.1 SCOPE	
1.2 REFERENCES	
1.3 MEASUREMENT	2
1.3.1 Reserved	2
1.3.2 Levee Crown Road and Ramps	2
1.3.2.1 Barge Delivery	2
1.3.2.2 Vehicle Delivery	2
1.3.2.3 Conversion from Tons to Cubic Yards	
1.4 PAYMENT	3
1.4.1 Levee Crown Road and Ramps	
1.5 QUALITY CONTROL	
1.5.1 General	
1.5.2 Reporting	
1.6 QUALITY ASSURANCE	
1.7 SUBMITTALS	
PART 2 PRODUCTS	
2.1 SURFACING	
2.1.1 Crushed Stone	
2.1.2 Recycled Portland Cement Concrete	
PART 3 EXECUTION	
3.1 BASE PREPARATION	
3.2 PLACEMENT	
3.2.1 General	
3.2.2 Levee Crown Road and Ramps	
3.3 THICKNESS	
3.4 COMPACTION	_
3.4.1 Shaping	
3.4.2 Compaction Equipment	
3.5 MAINTENANCE	
3.5.1 Levee Crown Road and Ramps	
3.6 HAUL ROADS	9

SECTION 02731 - SURFACING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor and materials and performing all work necessary to construct and maintain surfacing for the levee crown road and ramps.

1.2 REFERENCES

The following publications form a part of this specification to the extent indicated by the references thereto.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 29	(1997) Unit Weight and Voids in Aggregate
ASTM C 88	(1999a) Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 117	(2004) Materials Finer Than 75 micrometer (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 131	(2003) Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C 136	(2001) Sieve Analysis of Fine and Coarse Aggregates
ASTM D 75	(2003) Sampling Aggregates
ASTM D 1556	(2000) Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D 1557	(2000) Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/cu. ft. (2,700 kN-m/cu.m.))
ASTM D 2487	(2000) Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D 2922	(2004) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

02731-1 ED 06-057

ASTM D 3017 (2001) Water Content of Soil and Rock in Place by

Nuclear Methods (Shallow Depth)

ASTM D 4318 (2000) Liquid Limit, Plastic Limit, and Plasticity Index

of Soils

ASTM E 11 (2001) Wire-Cloth Sieves for Testing Purposes

ASTM E 329 (2005) Agencies Engaged in the Testing and/or

Inspection of Materials Used in Construction

1.3 MEASUREMENT

1.3.1 Reserved

1.3.2 Levee Crown Road and Ramps

Surfacing required for the levee crown road and ramps, including their maintenance with the limitations specified in paragraph 3.5, shall be measured by the cubic yard satisfactorily placed.

1.3.2.1 Barge Delivery

If delivery is made by barge and material is put in final placement directly from the barge, then volume shall be determined by on-deck measurement. In the event that material is piled in such form as to make on-deck measurement impossible or unduly difficult, the Contractor shall reshape the load into suitable form before measurement. If the material is not put in final placement directly from the barge, on-deck measurement will not be made. When materials are stockpiled and vehicle loaded prior to final placement, measurement will be made in accordance with paragraph 1.3.2.2, "Vehicle Delivery".

1.3.2.2 Vehicle Delivery

Measurement will be made by the cubic yard in approved vehicles at the site of the work. Allowance will not be made for wastage or shrinkage during transportation from car or other point of loading. Approved vehicles for this purpose may be of any type acceptable to the Contracting Officer. The body shall be that of any shape that the actual delivered contents may be readily and accurately determined and will remain constant. Unless all approved vehicles for the work are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its approved capacity. The Government may reject all loads hauled in non-approved vehicles. Upon delivery of each load at the jobsite and prior to the Contractor's measurement of each load, the Contractor shall "level-off" each load within the approved vehicles so that an accurate measurement of each load can be made. After leveling off the load, the Contractor's Quality Control personnel shall measure each load at the site of work.

02731-2 FD 06-057

The Government will inspect each load, check its yardage and witness the Contractor's measurement of each load.

1.3.2.3 Conversion from Tons to Cubic Yards

In lieu of vehicle delivery outlined above, the Contractor may use weights and a conversion factor to determine the cubic yard quantity of each vehicle. If this method is used the following procedures will be followed:

- (1) Using a vehicle where the volume capacity can easily be determined (a simple box bed with no obstructions in the bed), the vehicle is filled to capacity and the load leveled off.
- (2) The weight of material in the vehicle is determined using certified scales.
- (3) The vehicle is either driven to the site or a minimum of 10 miles if the vehicle is not actually used to deliver material to the site.
- (4) The volume of the material is then determined using the method outlined in the paragraph 1.3.2.2.
- (5) Using the weight of material in this test vehicle and the computed volume of material a factor to convert from tons to cubic yards is determined.

This conversion factor will be used to determine cubic yard quantities for material hauled from the same site with weights determined using certified scales. The above procedures will be repeated for every 1,000 cubic yards of material delivered from the same site. The procedure for determining the conversion factor shall be witnessed by the Government.

1.4 PAYMENT

1.4.1 Levee Crown Road and Ramps

Payment for the surfacing required for the levee crown road and ramps, including their maintenance with the limitations specified in paragraph 3.5 will be made at the contract unit price per cubic yard for "Surfacing". Price and payment shall constitute full compensation for subgrade preparation; furnishing all plant, labor, equipment, and materials; placing, spreading, compacting, and maintenance as shown on the drawings and specified herein. Payment for any additional surfacing materials required to repair any damages to the finished surfacing occasioned by the Contractors construction operations will be paid for at his/her own expense.

1.5 QUALITY CONTROL

1.5.1 General

02731-3 ED 06-057

The Contractor shall inspect all materials before they are incorporated into the work for compliance with contract requirements and any material found to be defective will be rejected. All information pertaining to the inspection shall be recorded and included in quality control reports furnished the Contracting Officer. The Contractor shall establish and maintain quality control for construction operations to assure compliance with contract requirements, and maintain records of his quality control for all construction operations. The quality control reports shall include, but not be limited to, the following:

- (1) <u>Equipment</u>. Type, size, and suitability for construction of the prescribed work and shall be maintained in satisfactory working condition at all times.
- (2) Submission of surfacing samples for quality testing, if from other than approved sources.
- (3) Quantity of surfacing delivered and placed each day.
- (4) <u>Construction</u>. Layout, maintaining existing drainage, thickness of layers, spreading and compacting.
- (5) <u>Foundation Preparation</u>. Surface preparation as required in advance of surfacing, and during the surfacing placement when necessary, stockpiles, and drainage of foundation.

(6) Materials.

(a) Sampling and Testing

Sampling and testing shall be the responsibility of the Contractor and shall be performed at no additional cost to the Government. Sampling and testing shall be performed by an approved commercial testing laboratory or by the Contractor, subject to approval. If the Contractor elects to establish its own testing facilities, approval of such facilities will be based on compliance with ASTM E 329. No work requiring testing will be permitted until the Contractor's facilities have been inspected and approved.

1. Sampling

Sampling of material shall be performed in conformance with ASTM D 75. Sampling will be observed by the COR.

2. Testing

Testing of surfacing materials shall be performed at a minimum frequency of one set of tests per 2,500 cubic yards or fraction thereof of surfacing material placed. Testing of surfacing materials

02731-4 FD 06-057

shall include gradation, Atterberg limit, abrasion and soundness testing as indicated in paragraphs 2.1.1 or 2.1.2. Test performance shall be pursued in such a manner that the results are obtained in the minimum time frame. All test results shall be furnished to the COR to confirm materials compliance with the specifications. Surfacing materials not meeting the specifications shall be removed from the site and replaced with surfacing materials meeting the specifications.

- (7) Grade and Cross Section. Width, side slopes, and grades.
- (8) <u>Grade Tolerances</u>. Check surfacing fills to determine if placement conforms to prescribed grade and cross section.

(9) Control Testing.

- (a) <u>Contractor Testing</u>. The Contractor shall perform all control testing such as control compaction curves, and in place density. The Contractor shall perform as a minimum, the specified number of each of the tests to demonstrate compliance with contract requirements to the satisfaction of the Contracting Officer. Testing shall be performed by a Government-approved testing agency or organization. Criteria used for obtaining Government approval shall be in accordance with ASTM E 329. Tests performed shall be pursued in such a manner that the results are obtained and furnished to the Government within 24 hours. No additional payment will be made for control testing required in this paragraph. All cost in connection therewith shall be included in all associated bid items requiring density testing. The following tests are required to provide adequate control:
 - 1. <u>Control Compaction Curves Compacted Fills</u>. Control compaction curves shall be established in accordance with ASTM D1557. Two control compaction curves will be required for each type of material requiring compaction.
 - 2. <u>In-Place Density Tests</u>. In-place density tests for compacted material shall be made in accordance with ASTM D1556, or ASTM D 2922, and shall be made at a frequency of a minimum of one density test per lift of material placed for the following items at the intervals or fractions thereof as stated: levee crown roads, per 500 linear feet; ramps, per each ramp. The Contractor shall conduct any additional testing as directed by the Contracting Officer to verify the required compaction. If ASTM D2922 is used, ASTM D3017 shall be used to determine the moisture content of the material. The location of the test shall be representative of the area being tested. The result of each in-place density test shall be furnished to the

02731-5 ED 06-057

Government prior to placement of additional material in the area represented by the test.

(b) <u>Government Testing</u>. As a control, the Government will perform assurance and check tests for maximum density for all materials in accordance with ASTM D1557. If values for maximum density as determined by the Contractor and as determined by the Government do not agree, the Government will determine the values to be used. The Government will also perform check and assurance testing of the other control testing required by the Contractor.

1.5.2 Reporting

The original and two copies of these records, as well as the records of corrective action taken, shall be furnished the Government daily. Format of the report shall be as prescribed in Section 01451, "CONTRACTOR QUALITY CONTROL".

1.6 QUALITY ASSURANCE

The Contracting Officer may direct, under the Contract Clause "Inspection of Construction" (FAR 52.246-12), additional testing of surfacing furnished to the worksite if the surfacing appears, by visual inspection, to be of questionable gradation or quality. The Government will perform assurance and check tests for maximum density for all materials in accordance with ASTM D1557. If values for maximum density as determined by the Contractor and as determined by the Government do not agree, the Government will determine the values to be used. The Government will also perform check and assurance testing of the other testing required by the Contractor.

1.7 SUBMITTALS

Certified Los Angeles Abrasion, Atterberg Limit, soundness and gradation test results of surfacing material shall be submitted to the Contracting Officer's Representative (COR) for approval prior to shipment.

PART 2 PRODUCTS

2.1 SURFACING

Soundness loss shall not exceed 15 percent when subjected to 5 cycles of the magnesium sulfate soundness test in accordance with ASTM C 88. Abrasion loss shall not exceed 40 percent when tested in accordance with ASTM C 131. Surfacing material shall be one of the following:

2.1.1 Crushed Stone

02731-6 ED 06-057

Crushed stone from the sources listed in Section 01100, General Provisions entitled "STONE SOURCES" shall consist of 100% stone and shall meet the following requirements when tested in accordance with ASTM C 117 and ASTM C 136, Procedure B:

U.S. Sieve	Percent Passing
1-1/2"	100
1"	90-100
3/4"	70-100
No. 4	35-65
No. 40	12-32
No. 200	5-12

The fraction of material passing the No. 40 sieve shall conform to the following requirements when tested in accordance with ASTM D 4318:

Liquid Limit (Max.) 25 Plasticity Index (Max.) 4

Crushed stone shall meet the testing requirements of Paragraph 2.1.

2.1.2 Recycled Portland Cement Concrete

Recycled Portland cement concrete shall consist of 100 percent crushed portland cement concrete and will be permitted in combination with other approved stone for surface course. This material or a combination thereof shall conform to the gradation requirements as specified in paragraph 2.1.1. Recycled portland cement concrete shall meet the testing requirements of Paragraph 2.1.

PART 3 EXECUTION

3.1 BASE PREPARATION

Prior to placement of the surfacing as indicated on the drawings, all debris shall be removed from the area to receive the surfacing. The surface of the underlying subgrade shall meet specified compaction and surface tolerances. Ruts, or soft yielding spots, in the underlying subgrade areas having inadequate compaction, and deviations of the surface from the specified requirements, shall be corrected by loosening and removing soft or unsatisfactory material and by adding approved material, reshaping to line and grade, and recompacting to specified density requirements. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained by the Contractor in a satisfactory condition until the surfacing is placed. Base preparation for the entire levee crown, and ramps shall be completed in advance of placing surfacing. Base preparation for the access roads

02731-7 FD 06-057

shall be completed at least 500 feet in advance of placement operations or as directed by the Contracting Officer.

3.2 PLACEMENT

3.2.1 General

The materials shall be placed to obtain uniformity of the surfacing material. The Contractor shall make such adjustments in placing procedures or in equipment as may be directed to obtain the true grades, to minimize segregation and degradation, to reduce or accelerate loss or increase of water, and to insure satisfactory surfacing material placement. Any materials that are found to be unsatisfactory shall be removed and replaced with satisfactory material or reworked, as directed, to meet the requirements of this specification. No surfacing shall be placed or compacted on a muddy or rutted subgrade.

3.2.2 Levee Crown Road and Ramps

The placement of surfacing shall not commence until all construction operations within the project limits have been finalized, including final dressing of the levee crown and ramps.

3.3 THICKNESS

Material shall be placed in layers, loose measurement, not to exceed 6 inches, followed by compaction. For courses requiring multiple layers, no overlying layer shall be placed until required compaction of the underlying layer has been achieved and approved. The Contracting Officer may at any time specify the thickness of any layer to be placed as required to achieve the required compaction. The thickness of each layer or lift placed shall be measured at intervals providing at least one measurement for each 100 linear feet or part thereof of surfacing for all items. Measurement of thickness for surfacing shall be taken prior to compaction.

3.4 COMPACTION

The surfacing material shall be compacted by making two passes with a rubber tired roller to provide a smooth, uniform, closely-knit riding surface as applicable free from ridges and depressions. The minimum requirements for rubber tired rollers to be used for compaction will be a 10 ton, 11 wheel, 7.50 X 15 tires, towed type, tandem, pneumatic-tired roller. The roller shall be towed at speeds not to exceed 5 miles per hour. The Contractor shall make such adjustments in compacting or finishing procedures as may be directed to obtain true grades, to minimize segregation and degradation, and to insure a satisfactory surfacing course. Any materials that are found to be unsatisfactory shall be removed and replaced with satisfactory material or reworked, as directed, to meet the requirements of this specification.

02731-8 FD 06-057

3.4.1 Shaping

Surfacing shall be shaped by placing of surfacing material followed by compaction. Any ruts formed shall be shaped as often as necessary to prevent breaking through the surfacing material into the subgrade. Holes, waves, and deficiencies in thickness, which may develop, shall be filled by adding more material followed by compaction. Shaping shall continue until the surface is free from ruts, and undulations.

3.4.2 Compaction Equipment

Compaction equipment shall be capable of properly compacting the surfacing material so that no planes of weakness or laminations are formed in the surfacing. Equipment shall be capable of compacting a layer not less not less than 9 inches thick and shall be operated at speeds not to exceed 5.0 miles per hour.

3.5 MAINTENANCE

3.5.1 Levee Crown Road and Ramps

The levee crown road and ramps shall be maintained by addition of and compaction of surfacing material as directed by the Contracting Officer to provide a usable and driveable road under all weather conditions during the construction period. No additional payment will be made for maintenance operations.

3.6 HAUL ROADS

Construction, surfacing and/or maintenance for any and all haul roads are the responsibility of the Contractor and no measurement or payments will be made for such roads.

02731-9 ED 06-057